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ABSTRACT

The Pennsylvania Assessment of Creative Tendency (PACT) is an experimental Likert Style Attitude Inventory designed to measure the creative tendency of elementary school children. PACT has been constructed over a period of four years, and has been subjected to item and factor analyses. The reading level has been set at Grade 5.0 or lower. To facilitate use in varied projects, PACT has been produced in several forms. The reliability of PACT has been consistently high, above 0.77, throughout several research projects. Investigations of content, predictive, criterion-related, and construct validity have yielded very favorable results. (Author/AG)

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Pennsylvania Assessment of Creative Tendency:

Norms-Technical Manual

by T. Jerome Rookey
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Pennsylvania Department of Education

June, 1971

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Introduction

Since the summer of 1967 educational researchers from the Pennsylvania Department of Education have been developing an instrument to measure the creative tendencies of intermediate school students. This instrument, the Pennsylvania Assessment of Creative Tendency (PACT), is a Likert Style attitude inventory. Subjects responding to the inventory agree or disagree with each item. According to the Flesch Reading Ease Scale, the reading level of each item in PACT is 5th grade or below and the inventory is useful for 5th grade and older children.

Conceptually, PACT is based upon three assumptions: first, there is such a thing as a student potential for creative output; second, there are events which affect creativity; third, there are characteristics which are common to creative production, whether the product be tangible or ideational. To utilize or define a mode of measurement, creativity was defined as the conception by an individual of an event or relationship which, in the experience of that individual, did not previously exist.

To construct items which concur with this definition, a profile of the creative child was drawn. This profile yielded nine traits which became criteria for item construction. These traits were self-direction, evaluative ability, flexible thinking, original thinking, elaborative thinking, willingness to take risks, ease with complexity, curiosity, and fluent thinking ability. To a great extent, these traits are derived from J. P. Guilford's work.

PACT deviates from the work of Guilford in that it has been designed on the assumption that divergent thinking or creativity is not only a cognitive but an affective phenomenon. As this assumption is in itself controversial, the validity of PACT will, of necessity, be established slowly by bits and pieces of research. While the instrument has been utilized in a number of projects, the measure is still in developmental and experimental stages. A 1968 study (88 Ss) suggested that PACT has more agreement with peer nomination of creative students than with teacher nomination of creative students.

A more recent study (75 Ss in three class groups) resulted in no significant correlation between PACT and a group tolerance measure or between PACT and an artistic ability (Hidden Figures) measure. However, a measure of self-esteem correlated significantly (0.01) with the first three factors which resulted from a factor analysis of PACT. In this study, a one-by-three analysis of variance among the three classes gave a significant F on both PACT and the Hidden Figures Test.

Research studies which will further validate or refine PACT are invited and will be appreciated. However, PACT cannot be duplicated or used as a measurement instrument without the written consent of the Pennsylvania Department of Education.

Item Analysis

In 1968, 244 grade 5 pupils were tested with the original 63-item PACT. The pupils in this study were a heterogeneous mixture of racial and socioeconomic groups. There were 130 male pupils and 114 female pupils participating. A Likert-T was run between the top and bottom 27 per cent score groups. Eighteen of the 63 items failed to discriminate at the .01 level between the bottom and top 27 per cent. The remaining 45 items were collated for use as PACT (Form - 45).

In 1969, 2,820 grade 5 pupils were tested with the 45-item PACT. These pupils were randomly selected from the Commonwealth's 5th grades using stratification to insure adequate representation. The average inter-item correlation was 0.0775 and the reliability coefficient was 0.7908. The six weakest items were deleted from the scale and the data was reanalyzed. The inter-item correlation of the 39-item PACT was 0.1032. The reliability coefficient was raised to 0.8178.

Reliability

Test-Retest

In 1968, 39 grade 5 pupils were tested and then retested 30 days later. The pupils in this study were racially and socioeconomically heterogeneous. The resulting reliability coefficient was 0.89.

Internal Consistency

In 1968, 50 grade 5 classes were randomly selected from all of the 5th grades in Pennsylvania. PACT was administered to the 1214 pupils who comprised the 50 classes. A Kuder-Richardson 20 was computed as a measure of internal consistency. The resultant coefficient was 0.87.

In 1969, 550 grade 5 pupils comprising all the members of an East-Central Pennsylvania School District completed PACT. The Kuder-Richardson 20 coefficient compiled was 0.92.

In 1970, PACT was administered to 19,513 grade 5 pupils. The pupils were members of 355 schools which had been randomly selected from all of the elementary schools in the Commonwealth of Pennsylvania. Cronbach's Coefficient Alpha was determined as a measure of internal consistency. The resultant reliability coefficient was 0.79.

Content Validity

The items selected for use in PACT were submitted to personnel in Educational Research, Elementary Education, Elementary Art Education, and Basic Education to select items representative of creative behavior. The judges were chosen on the basis of experience with the intermediate-level age group and/or familiarity with the research in creativity. The final selection was comprised of 63 items. Form 45 contains 45 of the 63 items.

Predictive Validity

In 1970, pupils from all over the nation submitted essays to a private publishing company to be judged on the basis of creative writing ability. The winners of this contest are recognized as creative elementary school pupils. These winners were utilized to assess the validity of the "Pennsylvania Assessment of Creative Tendency" (PACT).

The procedure followed was to mail an explanatory letter, a copy of PACT, and a stamped, self-addressed envelope to the teacher of each pupil. The sample consisted of 100 grade 4 pupils located in 30 states. The birth-dates of these pupils ranged from September 11, 1960, to November 14, 1961.

Thorndike and Hagen (1969) describe the use of predictions about group differences as a measure of construct validity. They state (p. 176), "For any given trait, our general knowledge of our society and the groups within it will suggest an array of group differences that seem to 'make sense.'" It was predicted that the distribution of test scores for these "creative" pupils would be negatively skewed when compared to the normal population distribution. This means that the sample score distribution would be concentrated on the upper half of the population score distribution.

Tests were sent to each of the 100 winners of the national contest. Scores were computed for 84 of the 100 pupils. For various reasons, 16 of the 100 pupils did not return PACT.

Normative data based on 2,816 grade 5 pupils' test scores were available as a population for comparison purposes. The added rigour of comparing 4th grade pupils to a 5th grade distribution was considered desirable.

In Table I, the descriptive data of the "creative" sample was compared to the population. It can be seen that the sample mean is more than one standard deviation beyond the population mean, which is clearly significant. It can also be seen that the sample standard deviation is greatly reduced in comparison to the population standard deviation.

TABLE I

Descriptive Data

	Population	Sample
Number	2816.0	84.00
Mean	135.7	157.42
Standard Deviation	18.5	11.57

When the 84 "creative" scores are positioned on the population distribution, 83 of the 84 scores are above the population mean.

In Table II, the frequencies of sample scores above given percentiles of the population distribution are given. It should be noted that almost half of the sample is above the populations' 90th percentile. Also, 28 of the 84 were above the 95th percentile and 8 were beyond the 99th percentile.

TABLE II

Sample Frequencies Positioned by Population Percentiles

Sample Frequency Beyond Given Percentile	Percentile on Population Distribution
77	60th percentile
70	70th percentile
60	80th percentile
40	90th percentile
28	95th percentile
8	99th percentile

It was accurately predicted that elementary students, who had gained national recognition as creative writers, would have a higher distribution of scores than the normal distribution on PACT. If we accept Tate's (1965, p. 183) definition of validity, ". . .the evidence observed faithfully represents the situation it is supposed to represent or really means what it is supposed to mean," then this study lends validity to the use of PACT as a measure of one aspect of elementary students' creativity. More important, this study suggests that creativity studies at the elementary level can be managed at an objective level.

Criterion-related Validity: The Hyer Study

Perhaps the most widely used creativity test today is the Minnesota Tests of Creative Thinking (MTCT) for which numerous reliability and validity studies have been conducted (Torrance, 1966). Hyer (1970) used the MTCT Verbal Form A in his study, obtaining both a composite score and three sub-test scores: fluency, flexibility and originality.

The sample in this study consisted of 288 grade 7 and 8 junior high school students, most of them from rural, middle-class families. This sample included 145 girls and 143 boys ranging in age from 131 to 190 months. The means of their intelligence quotients from the Otis-Lennon Mental Ability Test were 107.9 for the girls and 102.2 for the boys.

TABLE III is a zero-order correlation matrix. These data indicate that PACT relates significantly beyond the .01 level with all three sub-scores as well as the composite score of the MTCT. They also support the hypothesis that PACT relates significantly to intelligence at about the same degree as the MTCT.

TABLE III

Product Moment Correlation Coefficients

	IQ	MTCT Composite	Origin.	Flex.	Flue.
PACT	.360	.259	.287	.212	.218
MTCT					
Fluency	.230	.930	.829	.741	
Flexibility	.362	.905	.702		
Originality	.381	.910			
Composite	.355				

$.01\ r_{300} \geq .148$

Construct Validity: The Hyer Study

Hyer (1970) conducted a study which tested the relationship between PACT and three cognitive styles. The three cognitive styles employed were response tempo, response style, and response ambiguity.

Response tempo was defined as the tendency to display slow or fast reaction times in problem situations with high response uncertainty. Essentially, response tempo is the predilection toward reflection or impulsivity. Its scope is defined as a reflection-impulsivity dimension. In a sense, a

person develops a stable pattern or attitude toward problem solving and tends to utilize this as a problem-solving strategy. This cognitive style is especially appropriate to problems with alternative routes to solutions. Reflection upon the probable validity of varied solution sequences is critical for the ease with which success is achieved. The student who does not reflect on the differential validity of several solution possibilities is apt to offer the first idea that occurs to him.

The second cognitive style, response style, represents the stylistic tendency to use the extreme or moderate response categories on an intensity dimension. Those who possess the personal disposition to consistently respond in the radical position are said to have an extreme response style (ERS). As with impulsivity, this is an inappropriate response to stimuli in problem-solving tasks.

Hyer's third variable, response ambiguity, represents the tendency to be tolerant or intolerant of ambiguous stimuli. It is defined as a tolerance-intolerance of ambiguity dimension. This cognitive style is the construct of Frenkel-Brunswik (Adorno et al., 1950). It was considered one of the basic variables of both an emotional and cognitive orientation of an individual towards life. Accordingly, it has a determining influence on many types of problem solving. Intolerance of ambiguity represents an excessive maintenance of a cognitive organization that yields biased or lowered scores on academic measures. Necessary ingredients include a tendency to premature closure, a need to structure the environment even at the expense of neglecting reality, a tendency to precipitate early perceptual judgment, a propensity to think in rigid categories, and a frequent use of dichotomies.

Two of the cognitive styles of concern in the study, response ambiguity and response tempo, have been directly related to creative problem solving. Frenkel-Brunswik (1949) early linked tolerance of ambiguity with an openness in the cognitive, emotional and social areas. Essentially, this was the capacity of existing amidst a state of affairs in which one does not comprehend all that is going on, but continues to effect resolutions despite the present lack of homeostasis. This has received later support by Torrance (1962), Fleming and Weintraub (1962) and Stern (1967).

The relationship between response tempo and creative problem solving has been more equivocal. Barron (1953, 1955, 1963a, 1963b) and Guilford (Christensen et al., 1957) using different scales found both tolerance of ambiguity and impulsivity related to creativity. In contrast, other studies have demonstrated support only for tolerance of ambiguity. Long and Henderson (1964) using the Torrance test battery found that the more reflective style related to tolerating ambiguity, that of withholding opinions when information is lacking and resisting premature closure, is indicative of creative problem solving. Additional support for this has come from studies using projective tests (Weisberg and Springer, 1961), open-ended questionnaires (Torrance and Dauw, 1965) and summary articles (Golann, 1963).

The covariation of these response styles with PACT was studied in a sample consisting of 288 grade 7 and 8 junior high school students, including 145 girls and 143 boys ranging in age from 131 months to 190 months. The

means of the intelligence quotients, based on the Otis-Lennon Mental Ability Test were 107.9 and 102.2 respectively. The students were mostly from rural, middle-class families.

To assess response tempo, the Sutton-Smith, Rosenberg Impulsivity Scale for Children as modified by Hirschfield was used. For response style, the Perceptual Reaction Test was employed. The modified Revised California Inventory was employed to measure response ambiguity.

Multiple Regression analyses of creativity on the cognitive styles were computed.

Table IV contains the zero-order correlation coefficients of PACT and the cognitive styles. The data indicate that response ambiguity and response tempo were significantly related to PACT.

TABLE IV

Product Moment Correlation Coefficients

Response Ambiguity	Response Tempo	Response Style
0.488	-0.216	-0.017

$.01\ r_{300} \geq 0.148$

Table V contains the multiple regression coefficients of PACT and the three cognitive styles. Twenty-one per cent of the variance of PACT is explained. Upon examining the Beta weights (b) it is evident that response ambiguity accounts for the majority of the explained variance with response tempo minimally contributing and response style ineffective. As Hyer (p. 102) concludes, "On the basis of the previous research these results are comprehensible, since response ambiguity has consistently weighed on creativity, response tempo sporadically and response style appears devoid of any relationship."

TABLE V

Product Moment Correlation Coefficients

	Multiple R and R^2		Beta Weights		
Combination	R	R^2	RA(2)	RT(3)	RS(4)
$R^*_{1.234}$	.461	.212	.4301	-.0953	.0678

*PACT = 1
Response Ambiguity = 2 (RA)
Response Tempo = 3 (RT)
Response Style = 4 (RS)

As can be seen in Table VI, the addition of intelligence to the predictor variables only minimally increased the multiple coefficients.

TABLE VI

Product Moment Correlation Coefficients

	Multiple R and R^2		Beta Weights			
Combination	R	R^2	IQ(5)	RA(2)	RT(3)	RS(4)
$R^*_{1.2345}$	.489	.239	.1907	.3421	-.0876	-.0872

*IQ = 5

One can infer from this study that PACT is sensitive to response ambiguity, a tolerance of ambiguous situations. The considerable number of studies, previously cited, which related response ambiguity to creativity tend to give credence to the use of PACT as a measure of creativity.

PACT Form - 45

Both Form - 39 and Form - 45 have been analyzed according to class means and individual student scores.

For individual scores, the PACT mean score is 152.70. The variance is 358.11 and the standard deviation is 18.92. The unbiased estimate of variance is 358.23 and the unbiased estimate of the standard deviation is 18.93. The standard error of measurement is 8.65.

Table VII contains the percentile distribution of class mean scores on PACT - 45. For class mean scores, the mean score is 155.31 and the standard deviation is 16.46.

TABLE VII

Class Mean Distribution

PACT - 45 Score	Percentile
130	10
138	20
144	30
150	40
154	50
159	60
165	70
171	80
185	90

Table VIII contains the percentile distribution for individual scores.

TABLE VIII

Individual Score Distribution

PACT - 45 Percentile Rank	Raw Score
1	110
3	120
10	130
24	140
43	150
63	160
81	170
92	180
98	190
99	200

FORM - 45

DIRECTIONS: READ EACH STATEMENT CAREFULLY. BLACKEN THE CIRCLE WHICH BEST TELLS HOW YOU FEEL ABOUT THE STATEMENT. FOR EACH ITEM BLACKEN ONLY ONE CIRCLE.

		STRONGLY AGREE A	AGREE B	UNCERTAIN C	DISAGREE D	STRONGLY DISAGREE E
*	1. If the last page of a book is missing, the book is not worth reading.	( )	( )	( )	( )	( )
	2. I would like to make up a new song.	( )	( )	( )	( )	( )
	3. New words are fun to learn.	( )	( )	( )	( )	( )
*	4. T.V. news shows are boring.	( )	( )	( )	( )	( )
	5. I would like to learn a new game even if I lose at it.	( )	( )	( )	( )	( )
*	6. The best lessons contain only one idea.	( )	( )	( )	( )	( )
	7. New places are fun to visit.	( )	( )	( )	( )	( )
	8. I like to really do more than the teacher asks for.	( )	( )	( )	( )	( )
	9. I think that it is foolish to borrow other people's ideas.	( )	( )	( )	( )	( )
	10. The best toys are the kind that can be taken apart.	( )	( )	( )	( )	( )
	11. I like to meet new classmates.	( )	( )	( )	( )	( )
*	12. Creating new words is dumb.	( )	( )	( )	( )	( )
	13. It might be fun to try new games.	( )	( )	( )	( )	( )
	14. Learning how to do things is more important than getting excellent marks.	( )	( )	( )	( )	( )
	15. I like to try new things.	( )	( )	( )	( )	( )
	16. I like to make things without following directions.	( )	( )	( )	( )	( )
*	17. Pictures of grass should be colored only green.	( )	( )	( )	( )	( )
*	18. Only adults can run a house.	( )	( )	( )	( )	( )
	19. I think I could make up stories as good as those in books.	( )	( )	( )	( )	( )
*	20. You have to be grown up to think up a really good idea.	( )	( )	( )	( )	( )
*	21. I don't like changes.	( )	( )	( )	( )	( )

		A	B	C	D	E
* 22.	It is important to get the right answer even if I don't know how I got it.	( )	( )	( )	( )	( )
* 23.	I would rather play a game I know than learn a new one.	( )	( )	( )	( )	( )
24.	I enjoy learning how to do something in a new and different way.	( )	( )	( )	( )	( )
* 25.	The best way is the old way.	( )	( )	( )	( )	( )
26.	It would be fun to take a picture through a goldfish bowl.	( )	( )	( )	( )	( )
* 27.	I would rather copy poems from a book than make them up.	( )	( )	( )	( )	( )
* 28.	It is not much fun to visit new places.	( )	( )	( )	( )	( )
29.	I want to find out things that nobody else knows.	( )	( )	( )	( )	( )
* 30.	Games are not fun if you lose.	( )	( )	( )	( )	( )
31.	The more pieces in a puzzle, the better I like it.	( )	( )	( )	( )	( )
* 32.	The best friends are the ones who like the same things as I do.	( )	( )	( )	( )	( )
33.	Lessons that have a lot of different ideas in them are really good.	( )	( )	( )	( )	( )
* 34.	I don't like to learn new words.	( )	( )	( )	( )	( )
35.	News shows on T.V. are interesting to watch.	( )	( )	( )	( )	( )
* 36.	A good drawing has to look like the real thing.	( )	( )	( )	( )	( )
37.	I like to speak to the class and answer questions about my talk.	( )	( )	( )	( )	( )
* 38.	Singing a song that nobody else knows is silly.	( )	( )	( )	( )	( )
39.	If the last page of a story is missing, you should make up the ending.	( )	( )	( )	( )	( )
40.	Pictures of grass could be painted any color.	( )	( )	( )	( )	( )
* 41.	Making up stories is silly.	( )	( )	( )	( )	( )
42.	It would be fun to draw a picture while standing on your head.	( )	( )	( )	( )	( )
* 43.	New kids are not fun to meet.	( )	( )	( )	( )	( )
* 44.	It would be a waste of time to take a photograph through a fishbowl.	( )	( )	( )	( )	( )
45.	I think that it is foolish to copy other people's work.	( )	( )	( )	( )	( )

* Denotes negative scoring

PACT Form - 39

For individual scores, the PACT mean score is 135.7 and the standard deviation is 18.5. This percentile rank distribution is presented in Table IX for PACT - 39.

TABLE IX

PACT - 39 Score	Percentile
10	113
20	120
30	126
40	131
50	136
60	141
70	145
80	151
90	158

For class mean scores, the PACT mean score is 137.65 and the standard deviation is 5.32. The percentile rank distribution for individuals is presented in Table X.

TABLE X

PACT - 39 Score	Percentile
145.67	95
144.46	90
143.28	85
142.34	80
141.48	75
140.62	70
139.88	65
139.20	60
138.53	55
137.85	50
137.17	45
136.49	40
135.80	35
135.12	30
134.18	25
133.17	20
132.09	15
130.56	10
128.06	5

Beers (1970) in cooperation with the author factor analyzed Form - 39. The principal components solution reveals a general factor, Creative Tendency, supporting the use of a total score for the Goal VII inventory. All of the items have loadings of at least .37 on Factor 1 of the principal components solution.

Varimax rotation resulted in the following two factors:

Factor	Label	Variance Explained	Number of Items
1	Tendency Toward Creative Behavior	17%	19
2	Tendency Away from Creative Behavior	15%	19
	Total variance explained =	32%	

Each of the items loads substantially on just one factor. Factor 1 is explained by those items in which pupils express patterns of flexible thinking, willingness to take risks and curiosity. Factor 2 is explained by those items in which pupils show signs of inflexible thinking, an unwillingness to take risks and a lack of curiosity. It would seem that PACT is a unifactor test.

A Least Squares Regression Analysis of Form - 39 was conducted on the class means from 355 schools. The accountable variance was 0.3915. Five elements were maintained by the regression equation as shown in Table XI.

TABLE XI

Variable	Regression Coefficient (B)	Beta Coefficient (b)
Level of previous learning	0.7162	0.4662
Fathers Education	1.6008	0.1939
Sex	7.2878	0.1426
Teacher's Experience	0.1403	0.1689
School Enrollment	0.0022	0.1025

FORM - 39

* 1. If the last page of a book is missing, the book is not worth reading.

2. I would like to make up a new song.

3. New words are fun to learn.

* 4. T.V. news shows are boring.

5. I would like to learn a new game even if I lose at it.

* 6. The best lessons contain only one idea.

7. New places are fun to visit.

8. I like to really do more than the teacher asks for.

9. I think that it is foolish to borrow other people's ideas.

10. I like to meet new classmates.

* 11. Creating new words is dumb.

12. It might be fun to try new games.

13. I like to try new things.

* 14. Pictures of grass should be colored only green.

* 15. You have to be grown up to think up a really good idea.

* 16. I don't like changes.

* 17. It is important to get the right answer even if I don't know how I got it.

* 18. I would rather play a game I know than learn a new one.

19. I enjoy learning how to do something in a new and different way.

* 20. The best way is the old way.

21. It would be fun to take a picture through a goldfish bowl.

* 22. I would rather copy poems from a book than make them up.

* 23. It is not much fun to visit new places.

24. I want to find out things that nobody else knows.

* 25. Games are not fun if you lose.

26. The more pieces in a puzzle, the better I like it.

* 27. The best friends are the ones who like the same things as I do.

28. Lessons that have a lot of different ideas in them are really good.

* 29. I don't like to learn new words.

30. News shows on T.V. are interesting to watch.

* 31. A good drawing has to look like the real thing.

32. I like to speak to the class and answer questions about my talk.

* 33. Singing a song that nobody else knows is silly.

34. If the last page of a story is missing, you should make up the ending.

* 35. Making up stories is silly.

36. It would be fun to draw a picture while standing on your head.

* 37. New kids are not fun to meet.

* 38. It would be a waste of time to take a photograph through a fishbowl.

39. I think that it is foolish to copy other people's work.

* Denotes negative scoring

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Short Forms of PACT

Two new experimental forms of PACT have been composed. The first form is a split-half of 19 items per half. The two sets (19A and 19B) have been matched both factorially and by difficulty. The log ease* of 19A is 3.857 and is 3.845 for 19B.

The second experimental form is a triplate composed of three sets of 13 items. Each of the 13-item forms has six items from factor one and seven from factor two. The log ease for 13A is 2.458, for 13B is 2.519, and for 13C is 2.479.

Use of either the 19-item duplates or the 13-item triplates should be restricted to experimental studies until further analysis is completed.

* Log ease is a measure of the difficulty of any single item relative to the other items in the measure.

FORM - 19A

* 1. If the last page of a book is missing, the book is not worth reading.

2. New places are fun to visit.

3. I like to really do more than the teacher asks for.

4. I think that it is foolish to borrow other people's ideas.

5. I like to meet new classmates.

* 6. Creating new words is dumb.

7. I like to try new things.

* 8. Pictures of grass should be colored only green.

* 9. You have to be grown up to think up a really good idea.

* 10. I don't like changes.

* 11. It is important to get the right answer even if I don't know how I got it.

12. I enjoy learning how to do something in a new and different way.

* 13. The best way is the old way.

* 14. I would rather copy poems from a book than make them up.

* 15. Games are not fun if you lose.

16. The more pieces in a puzzle, the better I like it.

17. News shows on T.V. are interesting to watch.

18. I like to speak to the class and answer questions about my talk.

19. It would be fun to draw a picture while standing on your head.

* Denotes negative scoring

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FORM - 19B

1. I would like to make up a new song.
2. New words are fun to learn.
3. I would like to learn a new game even if I lose at it.
* 4. The best lessons contain only one idea.
* 5. Making up stories is silly.
* 6. I would rather play a game I know than learn a new one.
7. It would be fun to take a picture through a goldfish bowl.
* 8. It is not much fun to visit new places.
9. I want to find out things that nobody else knows.
* 10. The best friends are the ones who like the same things as I do.
11. Lessons that have a lot of different ideas in them are really good.
* 12. I don't like to learn new words.
* 13. A good drawing has to look like the real thing.
* 14. Singing a song that nobody else knows is silly.
15. If the last page of a story is missing, you should make up the ending.
16. It might be fun to try new games.
* 17. New kids are not fun to meet.
* 18. It would be a waste of time to take a photograph through a fishbowl.
19. I think that it is foolish to copy other people's work.

* Denotes negative scoring

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PACT - 13A

1. New places are fun to visit.
* 2. It would be a waste of time to take a photograph through a fishbowl.
* 3. The best friends are the ones who like the same things as I do.
4. I would like to learn a new game even if I lose at it.
5. I like to speak to the class and answer questions about my talk.
6. I think that it is foolish to borrow other people's ideas.
* 7. Singing a song that nobody else knows is silly.
8. I enjoy learning how to do something in a new and different way.
* 9. New kids are not fun to meet.
10. I would like to make up a new song.
* 11. I don't like to learn new words.
* 12. Making up stories is silly.
13. I want to find out things that nobody else knows.

* Denotes negative scoring

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PACT - 13B

1. It might be fun to try new games.

* 2. If the last page of a book is missing, the book is not worth reading.

* 3. It is not much fun to visit new places.

* 4. Games are not fun if you lose.

5. It would be fun to take a picture through a goldfish bowl.

* 6. The best lessons contain only one idea.

7. News shows on T.V. are interesting to watch.

* 8. A good drawing has to look like the real thing.

* 9. I would rather play a game I know than learn a new one.

10. I think that it is foolish to copy other people's work.

* 11. Pictures of grass should be colored only green.

12. It would be fun to draw a picture while standing on your head.

* 13. T.V. news shows are boring.

* Denotes negative scoring

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PACT - 13C

1. I like to try new things.

* 2. You have to be a grown up to think up a really good idea.

3. I like to meet new classmates.

* 4. I like to really do more than the teacher asks for.

5. It is important to get the right answer even if I don't know how I got it.

6. Lessons that have a lot of different ideas in them are really good.

* 7. I don't like changes.

* 8. I would rather copy poems from a book than make them up.

9. New words are fun to learn.

* 10. The best way is the old way.

11. If the last page of a story is missing, you should make up the ending.

* 12. Creating new words is dumb.

13. The more pieces in a puzzle, the better I like it.

* Denotes negative scoring

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